

## Rolling Knolls Landfill Draft Remedial Investigation Report (RIR)

### General RIR Comments

The following general comments, particularly Numbers 1 through 6, represent EPA's primary concerns with the RIR submitted on November 3, 2016. Additional comments related to some of these issues are also included in the Specific Comments section of this comment letter.

#### 1. Future Land Use

The RI does not adequately address a future residential land use scenario. The Site is currently zoned for residential use and ~~there is no~~ we have no evidence that a zoning change, covenant, or any institutional control that would prevent future residential use is in place or will be in place at the time of the remedy selection. ~~Because the Human Health Risk Assessment found unacceptable future residential risk to children and adults,~~ As such, the RI must delineate contamination that exceeds residential standards. Comparisons to Non-Residential standards are insufficient. Please revise these occurrences throughout the report (particularly Section 4) and on the figures that only show exceedances of Non-Residential Direct Contact Soil Remediation Standards. ~~In addition, the ball field and the shooting range are part of the Site and are also zoned residential, therefore the RI must delineate contamination that exceeds residential standards in these areas as well.~~

**Commented [VS1]:** Do we want to add a reference to the Dispute Resolution here?

#### 2. Impact to Groundwater

Impact to Groundwater Soil Screening Levels ~~must~~ should also be included as a screening reference for soil samples, and ~~the RI must~~ should delineate contamination that potentially impacts groundwater. Text, figures and tables throughout the report must be updated with this information.

#### 3. Overall Conceptual Site Model

The report does not adequately describe all aspects of the CSM for the Site, including the physical characteristics of the site, the nature and extent of contamination, and the fate and transport of contaminants. Specific concerns are listed in the following section, but the primary ones include:

- a. The report lacks information on groundwater/surface water interactions with regard to contaminant fate and transport. The only discussion of discharge/recharge is in the last paragraph of Section 6.2.2.2 and some is presented in Section 3.4.2.2, but this interaction needs to be applied to possible contaminant migration pathways and included in the CSM.
- b. Statements comparing upstream concentrations in brooks to onsite ponds are misleading and should be deleted from the report. Besides being two completely different types of systems, upstream brook locations would be subjected to many different point and nonpoint sources of contamination than onsite ponds. In addition, Nor is there is no any hydrological connection between the ponds and brooks.

- c. A section should be added to discuss the screening criteria selected to evaluate environmental data for the RIR. The discussion should include explanations of the criteria for various environmental media (e.g. soil remediation standards - inhalation/direct contact vs. impact to groundwater, groundwater quality standards based on the appropriate aquifer classification for the site, soil vapor screening levels for vapor intrusion criteria).
- d. EPA recommends an updated graphical representation of the site CSM be added to Section 6. This will aid in the readers understanding of the site.

#### 4. Background

The report asserts that metal contamination in soil and other media is "ubiquitous" throughout the site and the background areas. The report also describes elevated concentrations of other contaminants as being consistent with background. These statements, especially references to regional background, are not supported by the data and are too general.

For example, there are several contaminants that exceed soil ARARs, including PCBs and benzo(a)pyrene. Section 7 discusses these concentrations as being consistent with background conditions, but EPA does not think this statement is not supported by the data. The same is true for sediment (especially metals, PCB, pesticides and some SVOCs), and to a lesser extent for surface water and groundwater (mainly metals for groundwater).

In general, the report does not present the delineation of contamination in a clear, easy to understand way. At a minimum, background concentrations and a comparison to on-site concentrations should be shown on figures, and any conclusions regarding background must be revised as appropriate. Several specific examples are cited in the Specific Comments.

#### 4.5 TICs—1,4-Dioxane

The report should include 1,4-dioxane as an SVOC, not as a TIC or a VOC. The SVOC method for evaluating 1,4-dioxane is considered more reliable and has significantly lower method detection limits than the VOC method. EPA has previously made this request requested that 1,4-dioxane be evaluated and reported as an SVOC, but the report refers to the VOC concentrations. The SVOC method for evaluating 1,4-dioxane is considered more reliable and has significantly lower method detection limits than the VOC method. Additionally, and while the SVOC results for 1,4-dioxane are incorrectly reported as within the TICs and need to be incorporated into the results summary and delineation. The text, figures and tables must all be revised accordingly. Occurrences of Based on EPA's review, 1,4-dioxane exceeding the Interim Groundwater Standards at least at the following wells: reported as TICs include (during various sampling dates) MW-1, MW-3, MW-6, MW-7, MW-14, MW-15, MW-16, MW-20, X-1, GW-TWP-7, and GW-TWP-9. Include analysis of 1,4-dioxane in the SVOC tables as 1,4-dioxane, not as a TIC. This will affect all figures and tables too, please revise accordingly.

#### Upgradient/Downgradient—Ponds

Statements comparing upstream concentrations in brooks to on-site ponds are misleading and should be deleted from the report. Besides being two completely different types of systems, upstream brook

Commented [VS2]: I grouped this with the CSM comment

locations would be subjected to many different point and nonpoint sources of contamination than on-site ponds. Nor is there any hydrological connection between the ponds and brook.

#### 5.6. Report Organization and Presentation of Information

CDM—The report organization is hard to follow in many some respects. While EPA understands that we are on a tight schedule, please incorporate the following recommendations to the extent possible.

Additional recommendations are included in the specific comments:

a. For example, Appendix I seems to include only Phase 1 investigation results. It is recommended to include both phases.

a. Appendix I appears to include only Phase 1 investigation results. It is recommended to include both phases.

b. Section 6 - The fate and transport information might be better presented prior to the site conceptual model, and probably merits its own section earlier in the report.

c. It would be helpful to aide in the interpretation of the data in regards to nature and extent if sample locations presented in Appendix C were identified. It's understood that labeling might make the figures "busy"; however, it would make it easier to cross reference the sample locations with the data in Appendix B.

d.

e.

f. CDM—There appear to be several table, figure and appendix references that are possible remnants from a previous version or different report. There are also references to the SCSR that appear as though they should be addressing the RIR. Please review the document and make sure that all references are appropriate and correct for this report.

g. It would be good to have a table added that indicates which surface water and sediment samples were upstream brook samples, downstream brook samples, pond samples. What samples, if any, are in neither category – such as samples collected in the wetlands. The brooks should be better labeled on the maps, especially Black Brook.

h. It is very difficult to follow exceedances using report figures in Section 4 (box maps of all exceedances). Additional figures similar to those in Appendix C (presentation of what is below RDC, above RDC and above NRDC in surface soil and sediment; one contaminant per map) would be helpful in evaluating the site contamination.

i. No deep groundwater samples were collected (or results were not presented) for vertical delineation of groundwater. Describe any deep groundwater data collected in the RI. A more thorough description of the confining thick clay layer that is preventing downward migration of contamination should be included.

j. Figure 4-1's: Please include background soil locations and results on one of these figures.

Figure 4-2: Please update to include the 1,4-dioxane results as an SVOC as reported in the TICs.

Figure 4-3: ~~It may be helpful to~~ These figures should indicate a flow direction for the Black Creek and Loantaka Brook, or include the table from the report text categorizing each location as upgradient or downgradient.

Figure 4-4's: ~~Anchor is misspelled in the legends.~~

Appendix B Table B-3G: Please update to include Impact to Groundwater screening levels.

Appendix B Table B-4B: 1,4-dioxane should not be reported as a TIC. Additionally, please include a row of "Total TICs" and compare to the NJDEP Interim Groundwater Quality Standards Appendix Table 2 for Synthetic Organic Chemicals ([http://www.state.nj.us/dep/wms/bears/Appendix\\_Table\\_2.htm](http://www.state.nj.us/dep/wms/bears/Appendix_Table_2.htm)).

Appendix B Table B-4C: NJGWQC in this table should be updated to include interim GWQC to match the GWQC presented on the rest of the tables and figures.

There does not appear to be a summary of the fate and transport of constituents of concern in the conceptual site model in the executive summary. It is recommended that the executive summary include a discussion of each of the bullets noted in Section 1.3 Contents of the RIR.

The wetland delineation was done in 2006. Both the US Army Corps of Engineers and NJDEP typically apply a five-year lifespan to delineations, so site wetland boundaries may have to be re-checked.

**Commented [VS3]:** Not sure this belongs here...I'd just include it as a Specific Comment

#### 7. Skeet Shooting Over Ponds

~~In several locations in the report statements are made that skeet shooting over the ponds is a potential source of PAHs and lead. Please provide evidence or delete these statements.~~

#### 8. BERA

~~Check to make sure Verify the RI report BERA discussions are consistent with the final BERA.~~

**Commented [VS4]:** I left it, but I think this can just appear in the Specific Comments.

#### NJDEP

The Department, by law, does not accept baseline risk assessments to determine whether remediation is needed on a site. The need for remediation or for addressing the soil and groundwater contamination for the ingestion-dermal pathway is based on complying with the Department's Soil Remediation Standards and other media standards. The investigation's rationale, methodology and reports must conform to the Technical Requirements (NJAC 7:26E). This HHRA was reviewed, in accordance with standard EPA guidance, including EPA's Risk Assessment Guidance for Superfund, Vol. I, 1989 (RAGS, but the Department does not require such an assessment. In terms of accepting the HHRA, the Department defers to EPA.

While the actual risk assessment acceptability is deferred to EPA, remediation for this site must comply with Department policy and New Jersey statutes such that all contaminants present in concentrations above one in a million cancer risk and above a HQ of 1 are addressed either by remediation or institutional/engineering controls. Further, the contaminant concentrations on site must also address the Impact to Ground Water pathway. It should be noted that alternative site-specific standards utilizing values and conditions specific to the site may be developed. Guidance on this can be found on the Site Remediation Program guidance website.

**Commented [VS5]:** I wouldn't include this in the general comments.

Also, I thought we weren't going to attribute comments to particular groups?

#### 9. DSRA & FS

Several comments will affect development of the DSRA and FS. These include:

- a. ~~SE~~ Impacts to federally-listed (threatened) species and their habitat from any remedial alternatives under consideration should be assessed during the Feasibility Study. We recommend continued consultation with the USFWS.

~~b.~~

~~c.~~

- d. ~~SE~~ EPA had previously determined that the Wilderness Act may be an ARAR for the project, as the eastern half of the GSNWR was designated as a wilderness area by Congress in 1968. The potential for any future remedial alternative to impact the federally-designated wilderness area portion of the GSNWR should be assessed during the FS.

~~e.~~

- f. ~~SE~~ There are no wild and scenic rivers, coastal resources, coastal barriers, or significant agricultural lands in the vicinity of the site. The site does not lie within the designated coastal zone of the State of New Jersey. Therefore, the Wild and Scenic Rivers Act, the Coastal Barrier Resource Act, and the Farmland Protection Policy Act, and the Coastal Zone Management Act are not ARARs for this project.

- g. ~~C~~ We note that a previous document concerning the installation of monitoring wells at this site stated that no properties on the New Jersey or National Register of Historic Places were found in the vicinity of the proposed activities. In general, the lack of known sites is not enough to preclude potential adverse effects to cultural resources protected under the tenets of the National Historic Preservation Act (NHPA). We recommend that if and once a ground disturbing remedy is likely, a Stage IA Cultural Resource Survey should be completed, to determine if effects to historic resources are possible, and to ensure compliance with the NHPA.

- h. ~~C~~ According to available GIS layers, much of the site is located within the 100-year floodplain as determined by the Federal Emergency Management Agency. Accordingly, we recommend that future documents include a delineation of the 100-year and 500-year floodplain. If any future remedial activities are proposed within either floodplain, a floodplain assessment will be needed. Please note that this assessment should include:

- a description of the proposed action;

- the effects of the proposed action on the floodplain;
- a discussion of the impacts of the proposed action as compared to the other options; and
- measures to mitigate potential harm to the floodplain if there is no practicable alternative to locating in or affecting the floodplain, including measures to mitigate any potential impacts to the proposed remedial action from flooding events both during and after implementation of the proposed remedy.

This assessment will be needed to protect the remedy against the adverse effects of the 100-year and 500-year flood, including the spreading of contaminants and the long-term disabling of any needed remedial treatment systems.

h.g. The RI report notes that 202 acres of wetlands exist in the survey area, including 30.6 acres within the landfill. A review of National Wetlands Inventory GIS mapping indicates the site is nearly completely surrounded by wetlands. If wetlands are proposed to be impacted by future remedial activities, in addition to the completed delineation, a wetlands assessment will be needed. This assessment should include:

- an assessment of wetlands values and functions;
- a characterization of flora and fauna;
- a brief discussion of the impacts of any preferred remedial alternative as compared to the other options;
- the effects of contaminants on wetlands resources;
- measures to minimize potential adverse impacts that cannot be avoided;
- replacement for wetlands losses (mitigation); and
- a post-mitigation monitoring plan, if needed

h.f. Groundwater remedial alternatives should protect and restore the aquifer for beneficial use.